

occur which is part of a continuous series of nearly half a mile long. This structure contains thirty-one spaces of 25 feet wide each, the extreme height of the line above the brook being 72 feet. This viaduct is of timber, set upon piers of masonry. At the entrance to Accrington a line is sent off on the left to Burnley, over a stone and brick viaduct of twenty-two arches of 40 feet span; the highest point being towards its centre, where the distance between the water surface and the roadway is about 60 feet. The first arch of this viaduct is of hewn stone. The contractors for these and other works are Messrs. Smith and Pearce.—It may not be generally known, says *Herapath*, that large quantities of gunpowder are frequently and safely conveyed by railway. As much as 11 tons in one day, and in a few months above 100 tons have been carried on the London and North-Western line to Liverpool, Manchester, Leeds, and other places. The waggons are made expressly for the purpose. There are eight of these on the London and North-Western, constructed in accordance with the patent of Mr. Henson. The body of the wagon is formed with sheet iron on the outside: the interior is lined with 2-inch plank, between which and the iron outside a thickness of felt is carefully placed. These are screwed to either from the outside, so that there is nothing but wood inside, except on the floor, which is covered with sheet lead. The door fits close with a double rabbit, so that it is almost air-tight, and it is therefore impossible for any fire to get to the powder. The axles are cased with wood. The comparative absence of the usual noise and vibration in the movement of these powder-waggons is very remarkable.

## ELECTRO-TELEGRAPHIC.

The use of the telegraph enters into the everyday business of the press in America. Journals distant a day's journey from Congress have its speeches and proceedings in print while the speaker is in possession of the floor. This wonderful power, however, has been greatly abused; and just indignation at this want of principle in our transatlantic brethren has been repeatedly excited. With them the treachery of the telegraph appears to be "pretty considerable." It has almost universally happened of late, on an arrival from Europe, that the wires have been broken at some point along the line, and thus all correspondence has been cut off. When managed with integrity, the telegraphs radiating from New York furnish the papers with intelligence of ship news and other matters, at the rate of fifty dollars a week. The approach of the steamer *Cambria* has been announced in Boston, by means of the marine telegraph, while the vessel was yet nearly forty miles from the harbour. This news did not stop at Boston, but was, within five minutes, also announced in New York. At New York, the progress of the *Cambria* was also known as she entered the harbour, and at the moment she passed into the dock. By this wonderful medium of intelligence, the arrival of the steamer was reported in Springfield, Hartford, New Haven, New York, Philadelphia, Baltimore, and Washington, before the vessel reached the wharf in Boston; and the principal items of news were published in most of those places at the same time, and within one hour from the time of their publication in Boston.

**ARCHITECTURAL PRIZES: UNIVERSITY COLLEGE, LONDON.**—The following is a list of the students who have received prizes in architecture. As a *Fine Art*, 2nd year, 1st prize: John Norton, of London; 2nd prize: John G. Hall, of Hampstead; as a *Science*, 1st prize: Charles Poland, of London; 2nd prize: John G. Hall. *Fine Arts*, 1st year, 1st prize: Edward W. Tarn; 2nd prize: Thos. Hill, of London. *Science*, 1st year, 1st prize: Thos. Hill; 2nd prize: Edward W. Tarn.

**ENGINEERING PRIZES: UNIVERSITY COLLEGE.**—1st year, prize and 1st certificate: Gerard B. Smith, of London. 2nd year, prize and 1st certificate: Samuel S. Blackmore, of London. *Surveying*.—Prize and 1st certificate: John Young, of Chatham. *Mechanical Principles of Engineering*.—Prize and 1st certificate: Alfred Warren, of Kentish Town.

## METROPOLITAN COMMISSION OF SEWERS.

A GENERAL COURT was held on Thursday morning in last week; the Right Hon. Lord Morpeth, M.P., in the chair.

Mr. Hertalet, by order of the court, produced a list of the officers employed by the old, with those retained by the present commission, with the salaries attached.—The Hon. F. Byng said that statements had been put forth that the salaries paid by the present commission considerably exceeded those paid by the former commissioners. Now, what was the fact? Why, with a staff of officers far more efficient than what they formerly possessed, a saving had been effected on the present quarter of no less a sum than 1,351l. 13s. 4d.; and taking that sum for each quarter, the annual saving on this head alone would amount to 5,406l.—Lord Morpeth said this was a very important statement, and ought to be generally known.

Mr. Hertalet then read the following reports from the Ordnance Committee:—

"We have to report that the continuation of the survey of London by the Ordnance, as sanctioned by the court, is now in progress, and we have been assured that no time will be lost in proceeding rapidly, and at the same time effectively, with the work. Already a considerable force is stated to be on the ground.

The district previously surveyed by the Ordnance, and comprised within an area extending from Westminster-bridge, by the Rudge-walk, Constitution-hill, Knightsbridge, Grosvenor-road, Milman-square, and thence by the river to Westminster-bridge, is represented to be finished, and we expect the sheets on which this portion of the metropolitan survey is plotted, to be delivered to the commissioners from the Ordnance office within a very short time.

As soon as these sheets are received, the results of the subterranean survey of the same district, comprising the lines of sewers, with levels of numerous points on the inverts of the main and principal branch sewers, can be immediately inserted on them, this portion of the subterranean survey being nearly completed, so that the commissioners will then be in possession of a general view of the drainage of this portion of the metropolis.

At the same time they have correct information respecting the transverse and longitudinal forms of the sewers, the present condition of the materials with which they are constructed, and the state of sewers, as regards sediment and general condition, at the time when each sewer was examined."

"It appearing, upon examination, that the radius of eight miles from St. Paul's church is to be extended to which it is not desirable the survey of London should be rapidly carried, inasmuch as such districts are unimportant, while, at the same time, other districts on the confines of the area thus determined, such as Brentford, Kew, Richmond, and others, are important, and would be inconveniently divided from the general block plan as at present arranged, we would request authority so to apportion the survey, that the unimportant districts should be omitted, while those on the confines of the area of eight miles from St. Paul's, and important for the consideration of the general drainage area, should be submitted, it being always understood that neither the limits of the commission, nor the total amount of area to be surveyed, and for which the estimate have been framed, should be exceeded. We have reason to consider that by an adjustment of this kind a less area will, on the contrary, be found desirable.

It being extremely important that the subterranean survey, comprising the investigations noticed in our previous report, should always be so far advanced that when the plotted sheets of the block plan are received from the Ordnance Map Office, the directions, levels, and other information connected with the sewers may be immediately inserted so that general views on the subject of drainage may be entertained at as early a period as possible; we would also request authority so to proceed with the subterranean survey, by increase of force, including draughtsmen, that this desirable object may be attained.

Mr. Chadwick rose to move that these reports be received and adopted; but in consequence of the low tone in which he spoke, with the echo of the room, and the incessant noise of masonry-work on the outside, but very few of his observations were audible. He was understood to say that by the reports presented it would be seen that a necessity existed for proceeding with two surveys simultaneously, viz., the survey of the surface of the ground, and the survey beneath the ground, or what might be termed the subterranean survey. Until the present commissioners took office, there was no knowledge, or at any rate but a very imperfect one, of ancient sewers; and even recently-constructed sewers appeared to be nearly useless, as they had been constructed without any relation to levels or other important considerations. When the Ordnance maps were presented, they would be made available; but they were unable to commence new sewers until they got complete information; and with this view a set of questions had been submitted to the ratepayers to know whether their houses were drained or not, and on the general state of house-drainage. When they had obtained the information sought to be derived from these sources, it would form the base for future improvement. He believed that about 1,000 acres of the subterranean survey were now completed, and the committee hoped that the court would sanction such additional force as would enable them to keep pace with the Ordnance, and that the whole work might be completed with speed and efficiency.

Lord Ebrington seconded the motion. Mr. Bullar was anxious to know something of the extra expense of these proceedings.

Mr. Leslie considered that the whole matter should be referred back to the General Purposes Committee to report upon it, as the plotting could not be commenced for a short time. He would ask Sir Henry de la Beche whether that short time did not mean a fortnight or three weeks?

Another question he wished to ask was, whether the sum of 19,000l. required for the survey included the military pay of the officers and men, engaged in the work?

Sir Henry de la Beche said, with reference to the first question, he believed that in a fortnight or three weeks the plotted plans would be delivered to them, and when these plans arrived, they would then be able to lay down their own for subterranean purposes. As to the increase of expense, they asked for but two more levellers, with five or six men, and that the amount should be extremely limited, they proposed to take but 500l. on account. It would be perceived that it was very desirable to plot without delay, and to proceed at once with the work. With respect to the entire expense of the work, it appeared that a great error had arisen, and being anxious to obtain correct information, he had inquired at the Ordnance-office whether the amount of 19,000l. would include the military pay of the officers and men engaged in the survey? He was happy to state that this amount included the whole of those charges, and that any additional expense which had been stated was quite erroneous. He thought the sooner the public mind was disabused of this impression the better.

After a few words from Lord Ebrington, Mr. Bullar, Mr. Broderip, and the Rev. W. Stone—Lord Morpeth suggested that the case might be met by the adoption of the following resolution:—"That the reports now read be referred to the General Purposes Committee, and that the Survey Committee be authorized to order the expenditure of the sums immediately required for the purposes of the subterranean survey."—Mr. Chadwick objected to any reference, but other members having expressed their opinion, the amendment of Lord Morpeth was put, and carried by a large majority.

Mr. Hutton then proposed the following resolution:—"That the Ordnance Survey Committee be authorized to determine the boundary of the survey with reference to the line of eligible drainage area, and in accordance with the legal opinion which has been taken for their guidance; and that they report to the next court."—Carried.

It was ordered that a rate of 9d. in the pound be prepared for the Poplar and Blackwall district.

Various proposed works were ordered to be carried into effect, and the court was then adjourned to the 25th of July.

## Correspondence.

## COMPETITION AGAIN—NORMAL COLLEGE FOR WALES.

Sir,—Strange conditions as you know creep into the "Instructions to Architects," issued by the local committees of our day. Perhaps one of the strangest, and certainly one displaying very ingenious economy, appears in those forwarded to applicants "by the Building Committee of the Normal College for Wales, to be erected at Swansea." You will perceive that the said clause provides the committee with a contractor, without any further fuss or expense: but what will the architects' answer be?

The following is a copy of the condition: let them judge. The two premiums offered are 25 guineas and 15 guineas, and no pledge is given to employ the happy first-prize-holder in the erection of the building.

"The sum which the committee anticipates being able to devote to the buildings will be from 3,000l. to 3,500l., and it will be required of all parties competing, that they shall be prepared with approved contractors, who shall undertake to carry out their plans for a sum not exceeding the amount stated in the letter to the hon. secretary, which must accompany the plans.

"The buildings must be so arranged as to enable the committee to adopt either the warm-water, hot-air, or such other plan as may be agreed upon as the most approved for heating the principal apartments, the cost of which must be included in the estimate for the whole."

This is sufficiently rich in itself—comment would mar its humour.

## AN ARCHITECT OF THE CYMRU.

**IMPROVEMENTS AT THE BANK OF ENGLAND.**—A number of workmen are now employed in the contemplated improvements at the Bank. It is intended to raise the front about six feet with ornamental stone-work, in order to render the structure more in harmony with the adjoining buildings. It is said that the alterations will be made in such a manner as to afford greater protection in case of any disturbances arising in the metropolis. Poor Sir John!